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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,553	06/05/2001	Shuichi Takahashi	1999JP311	5029

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EXAMINER
CHU, JOHN S Y

ART UNIT	PAPER NUMBER
1752	4

DATE MAILED: 10/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/857,553	Applicant(s) TAKAHASHI	
	Examiner John S. Chu	Art Unit 1752	

-- Th MAILING DATE of this communication app ars on the cover sheet with the correspond nce address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 June 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *3* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

This Office action is in response to the application filed June 5, 2001.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over OTA et al.

The claimed invention is drawn to a radiation sensitive composition comprising a resin composition and a radiation sensitive material, wherein the resin composition comprises two or more kinds of resins, further wherein the resins have a difference in refractive index of at least 0.03.

OTA et al discloses photoresist composition comprising a mixture of two resins, the first being a novolak resin and the second being an acrylic resin as defined in the abstract as well as in column 3, lines 9 – column 4, line 44 and in Examples 1-12. The resins are not explicitly disclosed to have a refractive index difference of at least 0.03 or more, however the two resins

are sufficiently the same as those disclosed in the specification and in the claims, that it is asserted by inherency that the difference in refractive index would fall in the claimed range based on the significant difference in the type of resins and the similarity of those resins used in the specification. The Office does not have facilities to conduct tests on the prior art inventions and has thus placed the burden on the applicants to establish that the prior at fails to meet the claimed invention. The evidence of record is believed to sufficient to make the rejection as stated based on the similarity of the prior art resin mixture to the claimed mixture in the radiation sensitive composition.

It would have been *prima facie* obvious to one of ordinary skill in the art of photosensitive compositions to duplicate the resin mixture of the examples in OTA et al and reasonably expect a composition with good adhesion to the substrate and sufficient resolution for layer thicknesses of 20 um.

4. Claims 1-3 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over KOES et al or PADMANABAN et al.

The claimed invention has been recited above and is included by reference.

KOES et al discloses in Example 1 a resin mixture comprising a hydroxypropyl methylcellulose acetate succinate resin and a acrylate resin made from acrylic acid, 2-ethylhexyl acrylate and styrene. This resin mixtures used are sufficiently different such that it is asserted by inherency to possess a difference in the index of refraction of greater than 0.03 unless shown by applicant to be otherwise. The reasons for the assertion is based on the sufficient difference in the resins such that there would be a large difference in the index of refraction as claimed.

PADAMANABAN et al likewise discloses a resin mixture comprising two different resins such that it is asserted by inherency that the difference in the index of refraction of the two resins would fall within the claimed range of greater than 0.03. Examples 1-18 disclose a polyhydroxystyrene copolymer and an acetal resin. The Office does not have the facilities to test the claimed index of refraction of the resins and shift the burden on applicants to show that the prior art does not fall within the claimed range.

It would have been *prima facie* obvious to one of ordinary skill in the art of photosensitive compositions to duplicate the examples in KOES et al or PADMANABAN et al and reasonably expect same or similar results in composition flexibility and sensitivity upon processing.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chu whose telephone number is (703) 308-2298. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

The fax phone number for this Group is (703) 305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

John S. Chu
Primary Examiner, Group 1700

J.Chu
September 30, 2002